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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,433	02/06/2002	Hong Po	12832-011001	9542
38731	7590	09/08/2004	EXAMINER	
NUFERN			AL NAZER, LEITH A	
7 AIRPORT PARK ROAD			ART UNIT	
EAST GRANBY, CT 06026			PAPER NUMBER	
			2821	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,433

Applicant(s)

PO ET AL.

Examiner

Leith A Al-Nazer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-20 and 29-32 is/are allowed.
- 6) ☒ Claim(s) 21 and 24-28 is/are rejected.
- 7) ☒ Claim(s) 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 28 June 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1, 3-20, and 29-32 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach or suggest some of the limitations recited in independent claims 1 and 21. With respect to independent claim 1, the prior art of record (specifically Chang et al '965) fails to teach or suggest the first fiber portion being devoid of a reflector substantially reflecting energy at a wavelength. In contrast, Chang teaches reflector 11 in the first fiber portion. With respect to independent claim 29, the prior art of record (specifically Putnam et al '288 and Sorin et al '791) fails to teach or suggest no grating of a third grating pair being located between the gratings of the second grating pair. Therefore, independent claims 1 and 29, as well as respective dependent claims, are allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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3. Claims 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or suggest the limitations recited in dependent claims 22 and 23. With respect to dependent claims 22 and 23, the prior art of record fails to teach or suggest a third fiber Bragg grating in the second non loop-shaped portion of the fiber.

5. Claims 26 and 27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 26-28 recite the limitation "the predetermined energy" in the first line of each claim. There is insufficient antecedent basis for this limitation in each of claims 26-28.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 21, 24, 25, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al '965 in view of non-patent literature to Chang et al, entitled "A novel intracavity for efficient cascaded Raman generation using WDM couplers".

With respect to claims 21, 24, 25, and 28, Chang et al '965 teaches an energy source (100) capable of producing pump energy; a fiber coupled to the energy source so that the pump energy can be transferred from the energy source to the fiber, the fiber having a loop-shaped portion, a first non loop-shaped portion, and a second non loop-shaped portion (figure 3); a first fiber Bragg grating (36) in the first non loop-shaped portion of the fiber, the first fiber Bragg grating being capable of substantially reflecting

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the pump energy. Claims 21, 24, 25, and 28 require a second fiber Bragg grating in the second non loop-shaped portion of the fiber, the second fiber Bragg grating being capable of substantially reflecting energy having a wavelength comprising a Stoke shifted wavelength. Chang et al '965 teaches a reflector (31) in the second non loop-shaped portion of the fiber. However, non-patent literature to Chang et al teaches a fiber Bragg grating (1706A in figure 2) in a second non loop-shaped portion of fiber. At the time of the invention, it would have been obvious to one having ordinary skill in the art to replace the reflector (31) of Chang et al '965 with the grating of non-patent literature Chang et al. The motivation for doing so would have been to obtain an element with desired reflectivity properties in order to form an efficient resonating system.

Communication Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leith A Al-Nazer whose telephone number is 571-272-1938. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LA


Don Wong
Supervisory Patent Examiner
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